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EXAMINER

NATALINI, JEFF WILLIAM

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* VIJAY KUMAR and PRASUN RAHA

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Appeal 2009-000363  
Application 10/814,453  
Technology Center 2800

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Decided: August 18, 2009

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Before KENNETH W. HAIRSTON, MAHSHID D. SAADAT, and CARLA  
M. KRIVAK, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1-5 and 7-10, which constitute all of the claims pending in this application as claim 6 has been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

## STATEMENT OF THE CASE

Appellants' invention relates to a method for generating voltage waveforms for the purpose of injecting voltage overshoots and undershoots into electrical components during testing (Spec. ¶ [0001]). Claim 1, which is illustrative of the subject matter on appeal, reads as follows:

1. A method, comprising:
  - processing a request for a voltage overshoot or undershoot to determine a plurality of inputs based, in part, on a plurality of waveform parameters;
  - applying the plurality of inputs to a waveform generation circuit; and
  - generating a voltage waveform in accordance with at least one of the parameters.

The Examiner relies on the following prior art references in rejecting the claims:

Hanai	US 6,522,126 B1	Feb. 18, 2003
Chetlur	US 6,535,014 B2	Mar. 18, 2003

Claims 1-5 and 8-10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Chetlur.

Claim 7 stands rejected as being unpatentable under 35 U.S.C. § 103(a) over Chetlur and Hanai.

Rather than repeat the arguments here, we make reference to the Appeal Brief (filed May 24, 2006 and supplemented Oct. 5, 2007) and the Answer (mailed Aug. 2, 2006) for the respective positions of Appellants and the Examiner. Since no claims are argued separately from the others, we decide this Appeal on the basis of representative independent claim 1. *See*

37 C.F.R. § 41.37(c)(1)(vii) (“When multiple claims subject to the same ground of rejection are argued as a group by appellant, the Board may select a single claim from the group of claims that are argued together to decide the appeal with respect to the group of claims as to the ground of rejection on the basis of the selected claim alone.”). Further, only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants did not make in the Briefs have not been considered and are deemed waived. *See id.*

### ISSUE

Appellants’ arguments focus on the anticipation rejection of independent claim 1, stating that Chetlur discloses a multiplexer for selectively connecting an oscillator test signal, a first voltage, or a second voltage to the circuit path, which differs from the claimed “processing a request for a voltage overshoot or undershoot to determine a plurality of inputs based, in part, on a plurality of waveform parameters” (Br. 8). Therefore, we are presented with following issue:

Have Appellants shown that the Examiner erred in determining that Chetlur anticipates Appellants’ claimed invention by disclosing determining a plurality of inputs based on a plurality of waveform parameters?

### FINDINGS OF FACT

The following Findings of Fact (FF) are relevant to the issue involved in the appeal.

1. Appellants’ only argument is that the circuit shown in figure 1 and described in column 3, lines 32-35 of Chetlur includes “a multiplexer for

selectively connecting an oscillator test signal, a first voltage, or a second voltage to the circuit path that is being tested” (Br. 8).

2. The Examiner determined (Ans. 6) that the broadest reasonable interpretation of claim 1 does not preclude reading the claimed step of “to determine a plurality of inputs” on any low or high voltage or current values.

3. The Examiner found (Ans. 7) that Chetlur discloses inputs  $V_{DD}$  and  $V_{SS}$  are determined for processing a voltage overshoot or undershoot (Chetlur, col. 3, ll. 17-23; fig. 1).

4. The Examiner further relied (Ans. 7) on voltage controlled oscillator (VCO) 12 selecting and controlling the amplitude or the frequency of the signal in Chetlur to meet the claimed “applying the plurality of inputs” for “generating a voltage waveform” (Chetlur, col. 3, ll. 17-31).

5. The Examiner relied (Ans. 7) on the voltage levels of  $V_{DD}$  and  $V_{SS}$  as the waveform parameters, such as amplitude and frequency, that are applied to the waveform generation circuit VCO and result in a waveform (shown in the middle of the box in figure 1 (Chetlur, col. 3, ll. 17-24)).

6. The Examiner alternatively relied (Ans. 8) on multiplexer 13 for determining and selecting one of  $V_{DD}$  and  $V_{SS}$  to measure electrical parameters while the waveform is still generated by VCO (Chetlur, col. 3, ll. 33-53).

7. Multiplexer 13 allows a test pattern be applied to circuit path 11 using the oscillating test signal,  $V_{DD}$ , or  $V_{SS}$  (col. 3, ll. 36-39).

8. Chetlur discloses generating the first and second voltages  $V_{DD}$  and  $V_{SS}$ , generating the oscillating test signal having controllable amplitude defined between the first and second voltages using VCO 12, and selectively

connecting the test signal,  $V_{DD}$ , or  $V_{SS}$ , to circuit path 11 (col. 3, l. 66 – col. 4, l. 5).

### PRINCIPLES OF LAW

“[T]he words of a claim ‘are generally given their ordinary and customary meaning.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Furthermore, the specification is the single best guide to the meaning of a claim term. *Phillips v. AWH Corp.*, at 1315; *See also In re American Academy of Science Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

A rejection for anticipation requires that the four corners of a single prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation. *See Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1347 (Fed. Cir. 1999); *In re Paulsen*, 30 F.3d 1475, 1478-79 (Fed. Cir. 1994).

### ANALYSIS

Giving the broadest reasonable interpretation in light of the Specification to the claim terms without importing limitations, we find the Examiner’s interpretation of claim 1 to be reasonable. We also agree with the Examiner’s findings in the cited portions of Chetlur (FF 3-5) and further find that the multiplexer 13 is a part of the tester and selects and applies one of the oscillating test signal,  $V_{DD}$ , or  $V_{SS}$ , to the circuit path (*See Chetlur*, col. 3, ll. 32-44). In fact, Appellants focus on only one component of the test

circuit of Chetlur (FF 1), whereas VCO 12 of Chetlur also determines the inputs based on their amplitude or frequency (FF 5, 8). As such, the multiplexer connects the test signal generated by VCO to the circuit path (FF 7-8).

Therefore, we disagree with Appellants (Br. 8) that Chetlur does not disclose determining a plurality of inputs based on a plurality of parameters. In fact, the Examiner properly concluded (Ans. 7) that while the multiplexer may select among the test signal,  $V_{DD}$ , or  $V_{SS}$ , it is the VCO that determines a plurality of inputs based on a plurality of waveform parameters such as amplitude and frequency.

### CONCLUSION

For the reasons discussed above and provided by the Examiner, we conclude that Appellants have not shown error in the Examiner's position that Chetlur anticipates Appellants' claimed invention by disclosing determining a plurality of inputs based on a plurality of waveform parameters. Thus, we sustain the rejection of all the claims.

### ORDER

The decision of the Examiner to reject claims 1-5 and 7-10 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. 1.136(a)(1)(iv).

AFFIRMED

Appeal 2009-000363  
Application 10/814,453

gvw

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